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Applicant: Kao Kabushiki Kaisha
Tokyo, Japan

Title of Invention

An agent for treating hyperesthesia

[Claim 1]

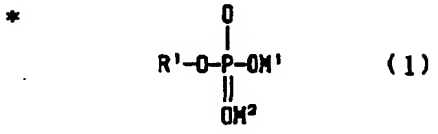
An agent for treating hyperesthesia, characterized by comprising the following components (A) and (B) at a weight ratio of (A):(B) = 1:1 to 1:50:

one or more water soluble phosphate compounds selected from the group consisting of (a) a phosphate ester having an alkyl group containing 6 to 20 carbon atoms which may be substituted by a fluorine atom, (b) a phosphate ester denatured silicone, and (c) a phosphate ester (meth)acrylate polymer; and

water insoluble calcium powders having a mean particle size between 0.01 and 2 μm.

[Claim 2]

The agent for treating hyperesthesia according to claim 1, wherein the phosphate ester (a) having an alkyl group containing 6 to 20 carbon atoms which may be substituted by a fluorine atom is a monoalkyl phosphate ester or mono(perfluoroalkyl) phosphate ester, represented by the following general formula (1):

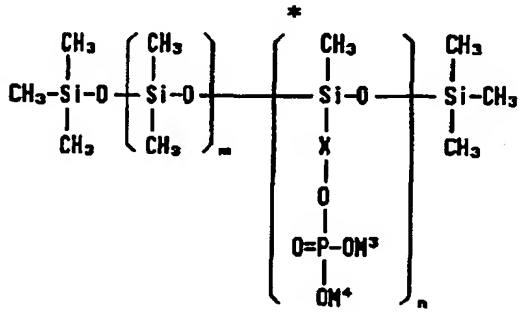


(1)

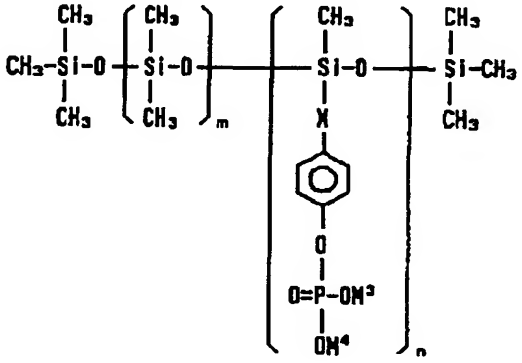
wherein R^1 represents an alkyl group or perfluoroalkyl group containing 6 to 20 carbon atoms, each of M^1 and M^2, which may be the same or different, represents a hydrogen atom, ammonium, alkylamine, alkanolamine or basic amino acid.

[Claim 3]

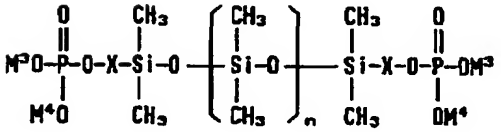
The agent for treating hyperesthesia according to claim 1, wherein the phosphate ester denatured silicon (b) is a polymer represented by the following general formulae (2), (3) or (4):



(2)



(3)



(4)

wherein X represents a divalent hydrocarbon group containing 1 to 10 carbon atoms, each of M^3 and M^4, which may be the same or different represents a hydrogen atom, ammonium, alkylamine, alkanolamine or basic amino acid, and each of m and n represents a positive number.

Page 7 claim 11 line 44 - column 12 line 33

Moreover, various types of known components can be mixed into the agent for treating hyperesthesia of the present invention, depending on the forms. For example, other than the above described dentin reinforcements such as a water soluble fluoride or medicinal agents, the following components can appropriately be used: wetting agents such as glycerin, sorbit, propylene glycol, 1,3-butylene glycol, ethylene glycol, polyethylene glycol, polypropylene glycol, xylit, maltit, or lactit; bonds such as carboxymethyl cellulose and salts thereof, methylcellulose, hydroxyethyl cellulose, carrageenan, sodium polyacrylate, hydroxypropyl cellulose, sodium carboxymethyl hydroxyethyl cellulose, sodium alginate, propylene glycol alginate, xanthan gum, gum tragacanth, karaya gum, gum Arabic, polyvinyl alcohol, polyvinylpyrrolidone, veegum, or laponite; sweeteners such as sodium saccharin, stevioside, thaumatin, or aspartyl phenylalanine methyl ester; antiseptics such as p-hydroxybenzoic acid, ethyl p-hydroxybenzoate, propyl p-hydroxybenzoate, butyl p-hydroxybenzoate, or sodium benzoate; coloring agents or colorant such as titanium dioxide; and aroma chemicals such as peppermint oil, spearmint oil, menthol, carvone, anethole, eugenol, methyl salicylate, limonene, ocimene, n-decyl alcohol, citronellol, α-terpineol, methyl acetate, citronellyl acetate, methyl eugenol, cineol, linalool, ethyl linalool, vanillin, thymol, anise oil, lemon oil, orange oil, sage oil, rosemary oil, cinnamon bark oil, pimento oil, cinnamon leaf oil, basil oil, gaultheria oil, clove oil, or eucalyptus oil. Moreover, the commonly used activators can appropriately be used in combination. Examples

of such an activator may include lauryl sulfate, myristyl sulfate, α-olefin sulfonate, N-acylamino acid salt, acyl monoglyceride sulfate, fatty acid monoglyceride, fatty acid monoalkanolamide, polyoxyethylene sorbitan fatty acid ester, polyoxyethylene hydrogenated castor oil, alkylglycoside, imidazolium betaine, alkylbetaine, alkylamidebetaine, sulfobetaine, and amine oxide sugar glycerin ester.